

Feedback from the European Marine Board Secretariat to the European Commission's call for evidence on the upcoming <u>EU</u> <u>Bioeconomy Strategy</u>

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The European Marine Board (EMB) welcomes the initiative of the European Commission (EC) for a new Bioeconomy Strategy. EMB supports the outlined objectives but urges the EC to give greater visibility to a Sustainable Blue Bioeconomy.

Marine biotechnology has the potential to play a significant role in advancing the EU Bioeconomy as highlighted in the EMB Policy Brief on Marine Biotechnology

(https://www.marineboard.eu/publication/marine-biotechnology-advancing-innovation-europebioeconomy-policy-brief). Marine biotechnology research and innovation products are already used by, and support developments in, global markets for food and feed, cosmetics, aquaculture, agriculture, chemistry and pharmacology. The range of products and services based on marine bioresources is also rapidly diversifying with applications in markets for industrial enzymes, functional foods, cosmeceuticals, pharmaceuticals, biomaterials, bioprocessing and medical devices (https://doi.org/10.5334/aogh.4471). However, the opportunities offered by marine biotechnology, (especially those arising from Areas Beyond Natural Jurisdiction) should be harvested sustainably and shared equitably among nations, in accordance with the provisions of the UN BBNJ Agreement.

Increasing resource efficiency and sustainability in the Blue Bioeconomy also means finding alternative fish and livestock feeds that do not depend as heavily on marine resources. Currently, between ¼ to ½ of the global wild fish capture is destined for fish and livestock feeds (https://doi.org/10.1017/awf.2024.7/ and https://doi.org/10.1038/s43016-022-00589-6), instead of human consumption. This results in suboptimal food availability, as a large proportion of the resources used in livestock and aquaculture feeds could be consumed by humans. Increasing the use of food by-products and residues as feed could reduce this competition, and the EU Bioeconomy should help advance this.

The Strategy notes that it will strengthen the role of primary producers, generating wealth in rural areas by creating jobs and diversifying incomes for foresters and farmers. This should also include diversifying income of fishers, who will inevitably suffer short term economic losses to ensure fish stocks are rebuilt and biodiversity loss halted.

Ecosystem-Based Fisheries Management (EBFM) is enshrined in European legislation such as the Common Fisheries Policy, but in practice it is not implemented in Europe (https://www.science.org/doi/10.1126/science.adv4341). EBFM is required to provide sustainable food from the Ocean, and to consider the impacts of climate change, for instance through predictive ecosystem models. In addition to considering the circularity / efficient use of resources, it is important that the nutritional value of food should be maintained, and that nutritious food should be safe and remain accessible to all (https://sophie2020.eu/strategic-research-agenda/). For instance, heavy metal pollution can have wide-ranging and long-lasting impacts on human health and the environment. These metals are released from industrial activities, and then bioaccumulate in aquatic organisms which when consumed, provide health risks to humans (https://doi.org/10.1007/s42452-023-05351-6).

In conclusion, we urge the Commission to give greater visibility to the important contribution the Ocean can play in the EU Bioeconomy, while highlighting the need for greater marine resource efficiency, sustainability, and pollutant control.